

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-257-AD; Amendment 39-13244; AD 2003-15-02]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135 and -145 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to all EMBRAER Model EMB-145 series airplanes, that currently requires repetitive replacement of the bleed-air check valve and associated gaskets on the bleed low-pressure lines of the engines with new parts. This amendment continues to require repetitive replacement of the bleed-air check valves and associated gaskets. Additionally, this amendment provides for optional terminating action for the repetitive replacement of bleed-air check valves by installing new improved check valves, and adds airplanes to the applicability of the existing AD. This amendment also clarifies that the replacement and follow-on actions are required for the left- and right-hand engines. The actions specified by this AD are intended to prevent failure of the bleed-air check valves on the bleed low-pressure lines of the engines, which could result in engine compressor stall and consequent flameout of the affected engines. This action is intended to address the identified unsafe condition.

DATES: Effective August 28, 2003.

The incorporation by reference of EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000; and Change No. 01, dated March 23, 2000; as listed in the regulations; is approved by the Director of the Federal Register as of August 28, 2003.

The incorporation by reference of EMBRAER Alert Service Bulletin 145-36-A011, dated March 19, 1999, as listed in the regulations, was approved previously by the Director of the Federal Register as of June 2, 1999 (64 FR 26835, May 18, 1999).

ADDRESSES: The service information referenced in this AD may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343—CEP 12.225, Sao Jose dos Campos—SP, Brazil. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1175; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 99-11-01, amendment 39-11172 (64 FR 26835, May 18, 1999), which is applicable to all EMBRAER Model EMB-145 series airplanes, was published in the Federal Register on March 20, 2001 (66 FR 15667). The action proposed to continue to require repetitive replacement of the bleed-air check valves and associated gaskets on the bleed low-pressure lines of the engines with new parts. That action also proposed to require repetitive replacement of an additional bleed-air check valve with a check valve having the same part number, or with a new improved check valve; and eventual replacement of the bleed-air check valves with new improved check valves, and various follow-on actions. In addition, that action proposed to add airplanes to the applicability of the existing AD.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received from a single commenter.

Request To Clarify Replacement Requirements

The commenter requests revising paragraph (b) of the proposed AD to specify that replacement of the bleed-air check valves on the bleed-air low-pressure lines applies to both the left- and right-hand engines. A reference to the left-hand engine was omitted from this paragraph.

The FAA concurs. Although a reference to the left-hand engine was inadvertently omitted from paragraph (b) of the proposed AD, it was our intent to reference both the left- and right-hand engines. This intent is apparent from the preamble discussion and from the repetitive replacement requirements of paragraph (c) of the proposed AD. We have revised paragraph (b) of the final rule accordingly. In addition, we have revised the Summary section of the final rule to clarify that the replacement and follow-on actions are required for both the left- and right-hand engines.

Request To Revise Service Bulletin References

The commenter requests adding a reference to EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000, in paragraphs (b), (c), and (d) of the proposed AD. The commenter states that EMBRAER Service Bulletin 145-36-0011, Change 01, dated March 23, 2000, was issued only for administrative purposes with no change to the technical content. In addition, the commenter states that Change 01 of the service bulletin divided the actions specified in the original service bulletin into ten parts because of a shortage of the bleed-air check valves needed to accomplish the service bulletin in its entirety (replacing all five check valves).

We concur with the request for the reasons provided by the commenter and have added a reference to EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000, in paragraphs (b) and (d) of this final rule.

Request To Revise Compliance Time in Paragraph (d)

The commenter requests changing the compliance time in paragraph (d) of the proposed AD for replacing the bleed-air check valve on the tube assembly of the auxiliary power unit (APU). The commenter states that, because of a shortage of bleed-air check valves, it is necessary to change "before further flight" to "within 4,000 flight hours after the effective date of this AD." The

commenter adds that only the bleed-air check valve on the bleed-air low-pressure line was replaced on the entire fleet of 65 affected airplanes. In addition, the remaining three bleed-air check valves (two high pressure and one APU) will be replaced during a C-check scheduled at 4,000 flight hours. The commenter is concerned that, if the present compliance time of "before further flight" is not changed, the 30 remaining airplanes (which still require two bleed-air check valves on the bleed-air high pressure lines, and one bleed-air check valve on the tube assembly of the APU) would be grounded.

Since issuance of the proposed AD, it has been determined that the requirements of paragraph (d) of the proposed AD do not address the unsafe condition. Therefore, those requirements have been removed from this final rule.

Request To Omit Paragraph (e)

The commenter suggests omitting paragraph (e) of the proposed AD because of the previously suggested changes to paragraph (d) of the proposed AD. The commenter contends that combining the requirements of paragraphs (d) and (e) would satisfy the terminating action requirement.

We partially agree. As described earlier, the requirements of paragraph (d) of the proposed AD have been omitted from this final rule. Because of this determination, the relief granted in paragraph (e) of the proposed AD still applies, and no change to paragraph (d) of this final rule (paragraph (e) of the proposed AD) is necessary in this regard.

Differences Between This Final Rule and the Service Bulletin/Brazilian Airworthiness Directive

Operators should note that, although the Accomplishment Instructions of Change 01 of the referenced service bulletin specify procedures that include Parts I through X, the Brazilian airworthiness directive references and requires accomplishment of only the procedures in Parts I through IV of the service bulletin. In consonance with the parallel Brazilian airworthiness directive, paragraph (b) of the proposed AD and the final rule require the actions specified in Parts I and II of the service bulletin. However, this final rule differs from the Brazilian airworthiness directive in that it does not require accomplishment of Parts III and IV of the service bulletin. For the purposes of this final rule, the actions specified in Parts III and IV of the service bulletin are optional terminating actions, as described in paragraph (d) of this final rule. The Departamento de Aviacao Civil has concurred in our assessment that accomplishment of the actions specified in Parts I and II are sufficient to ensure the safety of the fleet.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Changes to 14 CFR Part 39/Effect on the AD

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's airworthiness directives system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. However, for clarity and consistency in this final rule, we have retained the language of the NPRM regarding that material.

Cost Impact

There are approximately 135 Model EMB-135 and -145 series airplanes of U.S. registry that will be affected by this AD.

The repetitive replacements that are currently required by AD 99-11-01 take approximately 2 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the currently required actions on U.S. operators is estimated to be \$16,200, or \$120 per airplane, per each repetitive replacement. The new requirements of this AD add no additional economic burden.

The cost impact figures discussed above is based on the assumption that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-11172 (64 FR 26835, May 18, 1999), and by adding a new airworthiness directive (AD), amendment 39-13244, to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2003-15-02 Empresa Brasileira de Aeronautica S.A. (EMBRAER): Amendment 39-13244.
Docket 2000-NM-257-AD. Supersedes AD 99-11-01, Amendment 39-11172.

Applicability: All Model EMB-135 and EMB-145 series airplanes, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the bleed-air check valves on the bleed low-pressure line of the engines, which could result in engine compressor stall and consequent flameout of the affected engines; accomplish the following:

Restatement of Requirements of AD 99-11-01, Amendment 39-11172

(a) For Model EMB-145 series airplanes: Prior to the accumulation of 2,000 total flight hours, or within 100 flight hours after June 2, 1999 (the effective date of AD 99-11-01, amendment 39-11172), whichever occurs later: Replace the bleed-air check valves having part number (P/N) 816603-1, and associated gaskets having P/N 24096-250C, on the bleed low-pressure lines of the left- and right-hand engines, with new parts having the same P/Ns; per EMBRAER Alert Service Bulletin 145-36-A011, dated March 19, 1999; or EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000; or Change 01, dated March 23, 2000. Thereafter, repeat the replacement at intervals not to exceed 2,000 flight hours in accordance with the service bulletin.

New Requirements of This AD

Note 2: The replacement interval of 2,000 flight hours specified in paragraph (a) of this AD is required only until the requirements of paragraph (b) of this AD are implemented.

Replacement

(b) For all airplanes: Replace any bleed-air check valve having either P/N 816603-1 or P/N 816603-2 on the bleed-air low-pressure lines of the left- and right-hand engines, and associated gaskets having P/N 24096-250C, with a new check valve and associated gaskets having the same P/N, or a new improved check valve having P/N 816603-3 (including reworking the flanges) and associated gaskets having P/N 24096-250C; per EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000; or Change 01, dated March 23, 2000; at the later of the times specified in paragraph (b)(1) or (b)(2) of this AD:

- (1) Before the accumulation of 1,600 total flight hours, or within 1,600 flight hours since the last replacement of the check valve, whichever occurs later; or
- (2) Within 200 flight hours after the effective date of this AD.

Note 3: Where there are differences between this AD and the service bulletin, this AD prevails.

Repetitive Replacement

(c) For all airplanes: If the bleed-air check valves on the bleed-air low-pressure lines of the left- and right-hand engines have been replaced with check valves having either P/N 816603-1 or P/N 816603-2 per paragraph (b) of this AD, repeat the replacement requirements of paragraph (b) of this AD, at intervals not to exceed 1,600 flight hours, until the requirements of paragraph (d) of this AD are accomplished.

Optional Terminating Actions

(d) Replace bleed-air check valves on the bleed-air low-pressure lines of the left- and right-hand engines, having P/N 816603-1 or P/N 816603-2, with new improved bleed-air check valves having P/N 816603-3 (including reworking the flanges), per EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000; or Change 01, dated March 23, 2000. Accomplishment of these actions constitutes terminating action for the requirements of this AD.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(f) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) The actions shall be done in accordance with EMBRAER Alert Service Bulletin 145-36-A011, dated March 19, 1999; EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000; or EMBRAER Service Bulletin 145-36-0011, Change 01, dated March 23, 2000; as applicable.

(1) The incorporation by reference of EMBRAER Service Bulletin 145-36-0011, dated January 28, 2000; and EMBRAER Service Bulletin 145-36-0011, Change 01, dated March 23, 2000; is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of EMBRAER Alert Service Bulletin 145-36-A011, dated March 19, 1999, was approved previously by the Director of the Federal Register as of June 2, 1999 (64 FR 26835, May 18, 1999).

(3) Copies may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343–CEP 12.225, Sao Jose dos Campos–SP, Brazil. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Note 5: The subject of this AD is addressed in Brazilian airworthiness directive 1999-04-01R2, dated May 30, 2000.

Effective Date

(h) This amendment becomes effective on August 28, 2003.

Issued in Renton, Washington, on July 15, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-18417 Filed 7-23-03; 8:45 am]

BILLING CODE 4910-13-P